



[4910-13-P]

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2018-0956; Product Identifier 2018-NM-041-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; Fokker Services B.V. Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for all Fokker Services B.V. Model F.27 Mark 100, 200, 300, 400, 500, 600, and 700 airplanes. This proposed AD was prompted by a report of a main landing gear (MLG) collapse due to a broken drag stay; an investigation revealed that the drag stay failure was due to fatigue cracks, introduced by incorrect machining of the affected drag stay tube during production. This proposed AD would require an inspection of the drag stay unit to determine the signal indication, and related investigative and corrective actions if necessary. We are proposing this AD to address the unsafe condition on these products.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.

- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For Fokker service information identified in this NPRM, contact Fokker Services B.V., Technical Services Dept., P.O. Box 1357, 2130 EL Hoofddorp, the Netherlands; telephone +31 (0)88-6280-350; fax +31 (0)88-6280-111; email [technicalservices@fokker.com](mailto:technicalservices@fokker.com); Internet <http://www.myfokkerfleet.com>. For Safran service information identified in this NPRM, contact Safran Landing Systems, One Carbon Way, Walton, KY, 41094; telephone (859) 525-8583; fax (859) 485-8827. You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0956; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the regulatory evaluation, any comments received,

and other information. The street address for Docket Operations (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Tom Rodriguez, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206-231-3226.

**SUPPLEMENTARY INFORMATION:**

**Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2018-0956; Product Identifier 2018-NM-041-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. We will consider all comments received by the closing date and may amend this NPRM because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this NPRM.

**Discussion**

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2018-0015, dated

January 25, 2018 (referred to after this as the Mandatory Continuing Airworthiness

Information, or “the MCAI”), to correct an unsafe condition for all Fokker Services B.V.

Model F.27 Mark 100, 200, 300, 400, 500, 600, and 700 airplanes. The MCAI states:

In 1993, an occurrence was reported concerning an MLG collapse due to a broken drag stay on a Fokker F27 Mark 500 RFV (rough field version/configuration). The investigation revealed that the drag stay failure was due to fatigue cracks, introduced by incorrect machining (not smooth, with a notch) of the affected drag stay tube bore during production.

This condition, if not detected and corrected, could lead to MLG collapse, possibly resulting in damage to the aeroplane during landing and consequent injury to occupants.

To address this unsafe condition, DALG [Dowty Aerospace Landing Gear] issued SB 32-169B and SB 32-82W (both later revised), and Fokker Services issued SB F27/32-167, to provide inspection instructions. Consequently, the Civil Aviation Authority of the Netherlands (CAA-NL) issued AD (BLA) 93-169 (later revised) [which corresponded to FAA AD 97-04-08, Amendment 39-9932 (62 FR 7924, February 21, 1997), and applies to certain Fokker Model F27 Mark 050, 100, 200, 300, 400, 600, and 700 airplanes], requiring a one-time ultrasonic inspection to identify the type of drag stay tube installed (with stepped or straight bore) on each affected drag stay unit, inspection of the affected drag stay tubes for the presence of cracks, and, depending on findings, re-identification.

After CAA-NL AD (BLA) 93-169/2 was issued, another occurrence was reported on an F27 Mark 500 RFV. Investigation results determined that the drag stay tube of the second occurrence had not been inspected as required by CAA-NL AD (BLA) 93-169, due to misinterpretation of the instructions of Fokker SB F27/32-167. Prompted by these findings, Fokker Services issued SB F27-32-171, providing additional inspection instructions, and CAA-NL issued AD NL-2005-003 (EASA approval 2005-3869) [which corresponds to FAA AD 2006-25-06, Amendment

39-14847 (71 FR 71475, December 11, 2006) and applies to Fokker Services B.V. Model F.27 Mark 500 airplanes] to require repetitive inspections of the affected drag stay tubes to detect cracks and, depending on findings, rework or replacement.

Since those SBs and [CAA-NL] ADs were issued, the applicable CMM [component maintenance manual] were changed, although with incorrect P/N information, as a result of which an affected drag stay tube with a non-conforming bore radius may inadvertently have been installed on an aeroplane. Prompted by these findings, the applicable CMM were corrected and re-issued, and SLS issued Service Letter (SL) F27-W-8 to inform the operators, and Fokker Services introduced the relevant corrections in the F27 Mark 100 through Mark 700 Illustrated Parts Catalogue (IPC) in September 2017.

Installation of an affected drag stay tube with a non-conforming bore radius, on an MLG drag stay unit that has been re-identified, i.e. not subject to the repetitive inspections as required by CAA-NL AD NL-2005-003, would reintroduce the unsafe condition as originally addressed by the SBs and ADs referred to above. To address this potential unsafe condition, Fokker Services issued SBF27-32-173 to provide instructions to inspect, remove/discard or re-identify the affected drag stay tubes.

For the reasons described above, this [EASA] AD requires a one-time inspection of the affected drag stay units to determine whether an affected drag stay tube is installed, repetitive inspections of those that have an affected drag stay tube installed, and, depending on findings, accomplishment of applicable corrective action(s) [which includes replacement of the drag stay tube].

With the issuance of this [EASA] AD and [EASA] AD 2018-0016 [dated January 25, 2018], the requirements of CAA-NL AD (BLA) 93-169/2 dated 29 April 1994 are no longer necessary and that AD is also cancelled.

EASA AD 2018-0016, dated January 25, 2018, applies to Model F27 Mark 500 airplanes and has been added to the Required Airworthiness Action List.

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0956.

#### **Related Service Information under 1 CFR part 51**

Fokker Services B.V. has issued Service Bulletin SBF27-32-173, dated November 30, 2017. This service information describes procedures for an inspection of the drag stay unit to determine the signal indication, and related investigative and corrective actions if necessary.

SAFRAN Landing Systems (previously Messier-Dowty, Dowty Aerospace) has issued Dowty Aerospace Landing Gear Service Bulletin 32-82W, Revision 2, dated July 29, 1994; and Dowty Aerospace Landing Gear Service Bulletin 32-169B, Revision 2, dated July 29, 1994. The service information describes procedures for reworking the drag stay tube. These documents are distinct since they apply to different airplane models.

These service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

#### **FAA's Determination**

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because

we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop on other products of the same type design.

### **Proposed Requirements of this NPRM**

This proposed AD would require accomplishing the actions specified in the service information described previously.

### **Differences Between this Proposed AD and the Service Information**

Although the procedures specified in Fokker Service Bulletin SBF27-32-173, dated November 30, 2017, permits further flight if cracks are detected in the drag stay tube, this proposed AD does not. We have determined that, because of the safety implications and consequences associated with that cracking, any cracked drag stay tube must be repaired or modified before further flight. This difference has been coordinated with the manufacturer.

### **Costs of Compliance**

We estimate that this proposed AD affects 1 airplane of U.S. registry. We estimate the following costs to comply with this proposed AD:

#### **Estimated costs**

<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
2 work-hours X \$85 per hour = \$170	\$0	\$170	\$170

We have received no definitive data that would enable us to provide cost estimates for the on-condition actions specified in this proposed AD.

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

This proposed AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes to the Director of the System Oversight Division.

### **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States,



or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**Fokker Services B.V. Airplanes:** Docket No. FAA-2018-0956; Product Identifier 2018-NM-041-AD.

**(a) Comments Due Date**

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

This AD affects AD 2006-25-06, Amendment 39-14847 (71 FR 71475, December 11, 2006) (“AD 2006-25-06”) and AD 97-04-08, Amendment 39-9932 (62 FR 7924, February 21, 1997) (“AD 97-04-08”).

**(c) Applicability**

This AD applies to all Fokker Services B.V. Model F.27 Mark 100, 200, 300, 400, 500, 600, and 700 airplanes, certificated in any category.

**(d) Subject**

Air Transport Association (ATA) of America Code 32, Main landing gear.

**(e) Reason**

This AD was prompted by a report of a main landing gear (MLG) collapse due to a broken drag stay; an investigation revealed that the drag stay failure was due to fatigue cracks, introduced by incorrect machining of the affected drag stay tube during production. We are issuing this AD to address fatigue cracking, which could lead to MLG collapse and result in damage to the airplane during landing and consequent injury to passengers.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Definitions**

(1) For purposes of this AD, an affected drag stay unit is SAFRAN Landing Systems (previously Messier-Dowty, Dowty Aerospace) main landing gear (MLG) drag stay unit, part number (P/N) 200261001, P/N 200261002, P/N 200261003, P/N 200261004, P/N 200485001, P/N 200485002, P/N 200485003, P/N 200485004, P/N 200684001, P/N 200684002, P/N 200684003, and P/N 200684004.

(2) For purposes of this AD, an affected drag stay tube is a SAFRAN Landing Systems (previously Messier-Dowty, Dowty Aerospace) MLG drag stay tube, P/N 200259300, which has a change in section (stepped bore).

**(h) Configuration Verification of the Drag Stay Units**

Within 12 months after the effective date of this AD, do an ultrasonic inspection of each affected drag stay unit to determine the configuration of the drag stay tube, in accordance with step F. of the Accomplishment Instructions of Fokker Service Bulletin SBF27-32-173, dated November 30, 2017.

**(i) Re-identification of an Affected Drag Stay Unit**

(1) If, during the inspection required by paragraph (h) of this AD, an affected drag stay unit is found to have a straight bore drag stay tube, P/N 200485300, installed: Before further flight, re-identify that affected drag stay unit in accordance with step I.(2), I.(3), or I.(4), as applicable, of the Accomplishment Instructions of Fokker Service Bulletin SBF27-32-173, dated November 30, 2017.

(2) If, during the inspection required by paragraph (h) of this AD, an affected drag stay unit is found to have an affected drag stay tube, P/N 200259300, installed with a

correct radius: Before further flight, re-identify the affected drag stay unit in accordance with step J.(1), J.(2), or J.(3), as applicable, of the Accomplishment Instructions of Fokker Service Bulletin SBF27-32-173, dated November 30, 2017.

(3) If, during the inspection required by paragraph (h) of this AD, an affected drag stay unit is found to have an affected drag stay tube, P/N 200259300, installed with an incorrect radius: Before further flight, re-identify the affected drag stay unit in accordance with step K.(1), K.(2), or K.(3), as applicable, of the Accomplishment Instructions of Fokker Service Bulletin SBF27-32-173, dated November 30, 2017.

**(j) Inspection and Corrective Action for Certain Drag Stay Unit Part Numbers**

For affected drag stay units having P/N 200261002, P/N 200261003, P/N 200485002, P/N 200485003, P/N 200684002, and P/N 200684003: Within 12 months after the effective date of this AD, do an ultrasonic inspection of the affected drag stay tube for any cracking, in accordance with step G. of the Accomplishment Instructions of Fokker Service Bulletin SBF27-32-173, dated November 30, 2017.

(1) If, during the ultrasonic inspection, a crack indication is found, before further flight, replace the affected drag stay tube with a serviceable part, in accordance with step H. of the Accomplishment Instructions of Fokker Service Bulletin SBF27-32-173, dated November 30, 2017.

(2) For affected drag stay units having P/N 200261002, P/N 200485002, and P/N 200684002 (drag stay units with incorrect bore radius drag stay tubes): If, during the ultrasonic inspection, no indication of cracking is found, within 1,500 flight cycles after that inspection, and, thereafter, at intervals not to exceed 1,500 flight cycles until the next

scheduled MLG overhaul, repeat the ultrasonic inspection of the affected drag stay tube in accordance with step G. of the Accomplishment Instructions of Fokker Service Bulletin SBF27-32-173, dated November 30, 2017.

**(k) Parts Installation Limitation**

As of the effective date of this AD, no person may install, on any airplane, a drag stay unit (which includes installation of a replacement MLG), unless it has been determined that no affected drag stay tube is installed; or the installed affected drag stay tube has been reworked during the MLG overhaul in accordance with the instructions of Appendix B of Dowty Aerospace Landing Gear Service Bulletin 32-82W, Revision 2, dated July 29, 1994 (for Model F.27 Mark 500 airplanes), or Dowty Aerospace Landing Gear Service Bulletin 32-169B, Revision 2, dated July 29, 1994 (for Model F.27 Mark 100, 200, 300, 400, 600, and 700 airplanes), as applicable; or has passed an inspection (confirmed correct bore radius) in accordance with the Accomplishment Instructions of Fokker Service Bulletin SBF27-32-173, dated November 30, 2017. For the purpose of this AD, removal of an MLG or an affected drag stay unit from an airplane and re-installing that MLG or drag stay unit on the same airplane is not “installation.”

**(l) Terminating Action for Inspections of the MLG Drag Stay Units**

Accomplishment of the actions required by this AD terminates all the requirements in AD 2006-25-06, Amendment 39-14847 (71 FR 71475, December 11, 2006); and AD 97-04-08, Amendment 39-9932 (62 FR 7924, February 21, 1997).

**(m) Credit for Previous Actions**

This paragraph provides credit for actions required by paragraph (j) of this AD, if those actions were performed before the effective date of this AD using Dowty Aerospace Landing Gear Service Bulletin 32-82W, Revision 1, dated September 10, 1993, or Dowty Aerospace Landing Gear Service Bulletin 32-169B, Revision 1, dated September 10, 1993, which were incorporated by reference in AD 2006-25-06, Amendment 39-14847 (71 FR 71475, December 11, 2006).

**(n) Other FAA AD Provisions**

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, International Section, Transport Standards Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Section, send it to the attention of the person identified in paragraph (o)(2) of this AD. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, International Section, Transport Standards Branch, FAA; or

the European Aviation Safety Agency (EASA); or Fokker Services B.V.'s EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

**(o) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA AD 2018-0015, dated January 25, 2018, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0956.

(2) For more information about this AD, contact Tom Rodriguez, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206-231-3226.

(3) For Fokker service information identified in this AD, contact Fokker Services B.V., Technical Services Dept., P.O. Box 1357, 2130 EL Hoofddorp, the Netherlands; telephone +31 (0)88-6280-350; fax +31 (0)88-6280-111; email [technicalservices@fokker.com](mailto:technicalservices@fokker.com); Internet <http://www.myfokkerfleet.com>. For Safran service information identified in this AD, contact Safran Landing Systems, One Carbon Way, Walton, KY, 41094; telephone (859) 525-8583; fax (859) 485-8827. You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

Issued in Des Moines, Washington, on October 26, 2018.

Michael Kaszycki,  
Acting Director,  
System Oversight Division,  
Aircraft Certification Service.

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